

HIGH SIDE POWER SWITCH WITH
CHARGE PUMP AND BOOTSTRAP CAPACITOR

ABSTRACT OF THE DISCLOSURE

A power switching circuit comprising a power semiconductor switching device, a charge pump circuit having a control input to control whether it is on or off and a charge pump output, the charge pump output being coupled to a control terminal of the power semiconductor switching device, a bootstrap power supply for supplying power to driver circuitry for the power semiconductor switching device, the bootstrap power supply comprising a bootstrap capacitor coupled to a charging current source, the bootstrap power supply providing power to the driver circuitry when the power semiconductor switching device is being switched by the driver circuitry in a pulsed mode, and the charge pump supplying a control voltage to turn on the power semiconductor switching device and maintain it on when the power switching semiconductor device is to be maintained on continuously.